

## CLAIMS

1. An image display device comprising:
  - a display element which optically modulates an incident light for  
5 displaying a video image;
  - a lamp which is a light source of the incident light to the display element;
  - a lamp driver for driving the lamp;
  - a lamp power level calculator for calculating and outputting a driving  
10 power level of the lamp in accordance with a level of an input video signal;  
and
  - a lamp temperature controller for controlling a temperature of the lamp depending on a change in an input signal from the lamp power level calculator so as to change a temperature of the lamp within a predetermined  
15 range in response to fluctuation of the input video signal.
2. The image display device as defined in Claim 1, wherein the lamp temperature controller is a lamp driving level correcting unit for correcting a lamp driving level in response to fluctuation of the input video signal; and  
20 the lamp driving level correcting unit comprises:
  - a lamp driving level signal integrator for applying time integration to an input from the lamp power level calculator; and
  - a lamp driving level corrector for correcting an input signal from the lamp power level calculator using an input signal from the driving level  
25 signal integrator.

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3. The image display device as defined in Claim 1, wherein the lamp temperature controller comprises:

a fan control signal generating unit for controlling a number of revolutions of a fan for temperature control in accordance with an input from  
5 the lamp power level calculator, and

a lamp temperature control fan controlled by an input signal from the fan control signal generating unit;

wherein the temperature of the lamp is changed within a predetermined range by controlling the number of revolutions of the fan in  
10 response to fluctuation of the input video signal.

4. The image display device as defined in Claim 3, wherein the fan control signal generating unit comprises:

a lamp driving level signal integrator for applying time integration to  
15 an input signal from the lamp power level calculator; and

a fan control signal generator for controlling the number of revolutions of the fan in accordance with an input signal from the lamp power level calculator and an input signal from the lamp driving level signal integrator.

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5. The image display device as defined in Claim 1, wherein the lamp temperature controller comprises:

a lamp driving level correcting unit for correcting a lamp driving level in response to fluctuation of the input video signal;

25 a fan control signal generating unit for controlling a number of revolutions of a fan for temperature control in accordance with an input signal from the lamp power level calculator; and

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a lamp temperature control fan controlled by an input from the fan control signal generating unit;

wherein the lamp driving level is corrected in response to fluctuation of the input video signal, and the number of revolutions of the fan is controlled in response to fluctuation of the input video signal so as to change a temperature of the lamp within a predetermined range.

6. The image display device as defined in Claim 5, wherein the lamp driving level correcting unit comprises:

10 a lamp driving level signal integrator for applying time integration to an input signal from the lamp power level calculator; and

a lamp driving level corrector for correcting an input signal from the lamp power level calculator using an input signal from the driving level signal integrator.

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7. The image display device as defined in Claim 5, wherein the fan control signal generating unit comprises:

a lamp driving level signal integrator for applying time integration to an input from the lamp power level calculator; and

20 a fan control signal generator for controlling the number of revolutions of the fan in accordance with an input signal from the lamp power level calculator and an input signal from the driving level signal integrator.

25 8. The image display device as defined in one of claims 1 to 7 further comprising a projection lens for projecting and displaying an image formed in the display element on a screen.